Amana®

MENUMASTER®
COMMERCIAL MICROWAVE OVEN

Service

This manual is to be used by qualified appliance technicians only. Maytag does not assume any responsibility for property damage or personal injury for improper service procedures done by an unqualified person.

2006 International Countertop Commercial Microwave Ovens

This Base Manual covers general information

Refer to individual Technical Sheet for information on specific models

This manual includes, but is not limited to the following:

ALD510D	P1331003M
UALD510D	P1331004M
ALD510	P1331005M
UALD510	P1331006M
MLD510D	P1331007M
UMLD510D	P1331008M
MLD510	P1331009M
UMLD510	P1331010M

MAYTAG®

16026969
April 2006

Important Information

Important Notices for Servicers and Consumers

Maytag will not be responsible for personal injury or property damage from improper service procedures. Pride and workmanship go into every product to provide our customers with quality products. It is possible, however, that during its lifetime a product may require service. Products should be serviced only by a qualified service technician who is familiar with the safety procedures required in the repair and who is equipped with the proper tools, parts, testing instruments and the appropriate service information. **IT IS THE TECHNICIANS RESPONSIBILITY TO REVIEW ALL APPROPRIATE SERVICE INFORMATION BEFORE BEGINNING REPAIRS.**

⚠ WARNING

To avoid risk of severe personal injury or death, disconnect power before working/servicing on appliance to avoid electrical shock.

To locate an authorized servicer, please consult your telephone book or the dealer from whom you purchased this product. For further assistance, please contact:

Service Support Center

Contact your local product distributor or vist the Web site at www.amanacommercial.com.

Recognize Safety Symbols, Words, and Labels

⚠ DANGER

DANGER—Immediate hazards which **WILL** result in severe personal injury or death.

⚠ WARNING

WARNING—Hazards or unsafe practices which **COULD** result in severe personal injury or death.

⚠ CAUTION

CAUTION—Hazards or unsafe practices which **COULD** result in minor personal injury, product or property damage.

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PRECAUTIONS TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY

(a) **DO NOT** attempt to operate this oven with the door open since open-door operation can result in harmful exposure to microwave energy. It is important not to defeat or tamper with the safety interlocks.

(b) **DO NOT** place any object between the oven front face and the door or allow soil or cleaner residue to accumulate on sealing surfaces.

(c) **DO NOT** operate the oven if it is damaged. It is particularly important that the oven door close properly and that there is no damage to the: (a) Door (bent), (b) hinges and latches (broken or loosened), (c) door seals and sealing surfaces.

(d) The oven should **NOT** be adjusted or repaired by anyone except properly qualified service personnel.

PRECAUTIONS A PRENDRE POUR EVITER LES RISQUES D'EXPOSITION A DES QUANTITES EXCESSIVES D'ENERGIE MICRO-ONDE

(a) **NE PAS** essayer de faire marcher le four avec la porte ouverte car cela risque d'exposer l'utilisateur à une quantité nocive d'énergie micro-onde. Ne jamais supprimer ou altérer les verrouillages de sécurité.

(b) **NE RIEN METTRE** entre la face avant du four et la porte et ne pas laisser de saletés ou de produits de nettoyage s'accumuler sur les surfaces d'étanchéité.

(c) **NE JAMAIS** faire fonctionner le four s'il est endommagé. Il est tout particulièrement important que la porte du four se ferme correctement et que les éléments suivants fonctionnent sans problème : a) la porte (faussée), b) les charnières et les verrouillages (cassés ou desserrés), c) les joints et les surfaces d'étanchéité de la porte.

(d) Le four **NE DOIT ETRE** réparé que par des réparateurs qualifiés.

PRECAUCIONES PARA EVITAR LA POSIBLE EXPOSICION EXCESIVA A LA ENERGIA DE MICROONDAS

(a) **NO** intente hacer funcionar este horno con la puerta abierta ya que podría resultar en una exposición dañina a la energía de microondas. Es muy importante no pasar por alto o averiar los interruptores de seguridad.

(b) **NO** coloque ningún objeto entre el frente del horno y la puerta. Tampoco permita que suciedad o residuos de limpiador se acumulen en las superficies de sellado del aparato.

(c) **NO** haga funcionar el horno si éste estuviera averiado. Es de particular importancia que la puerta del horno se cierre correctamente y que no existan daños en: (a) la puerta (dobladuras), (b) las bisagras y el pestillo (rotos o flojos), (c) los sellos de las puertas y otras superficies de sellado.

(d) El horno **NO** deberá ser ajustado o reparado por ninguna persona excepto personal de servicio propiamente calificado.

VORSICHTSMASSNAHMEN ZUM SCHUTZ GEGEN MIKROWELLENSTRAHLUNG

(a) **NICHT** versuchen, den Herd mit offener Tür zu betreiben, da Sie dadurch schädlicher Mikrowellenstrahlung ausgesetzt werden können. Auf keinen Fall die Sicherheitsverriegelung unwirksam machen oder ändern.

(b) **KEINE** Gegenstände zwischen Herd und Tür einklemmen oder Schmutz und Rückstände von Reinigungsmitteln auf den Dichtflächen sich ansammeln lassen.

(c) **KEINEN** beschädigten Herd benutzen. Es ist besonders wichtig, daß die Herdtür richtig schließt und die folgenden Teile nicht beschädigt sind: (a) Tür (z.B. verbogen), (b) Scharniere und Klinken (z.B. gebrochen oder lose), (c) Türdichtungen und Dichtflächen.

(d) Das Gerät **NUR** von qualifiziertem Kundendienstpersonal reparieren lassen.

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Important Safety Information

VAROITUS
MIKROAALTOSÄTEILYÄ

Käyttäjä ei saa joutua alttiiksi mikroaaltoenergialle, jota voi säteillä magnetronista tai muusta mikroaaltoja kehittävästä laitteesta, jos sitä käytetään väärin tai jos se kytketään väärin. Kaikkien mikroaaltoliitäntöjen sekä syöttöettä ulostulopuolella, aaltoputkien laippojen ja tiivisteiden tulee olla varmistettuja. Mikroaaltouunia ei saa koskaan käyttää ilman kuormaa, jossa mikroaaltoenergiaa kuluu. Avoimeen aaltoputkeen tai antenniin ei saa koskaan katsoa virran ollessa kytkettynä.

VARNING FÖR
MIKROVÅGSSTRÅLNING

Mikrovågsenergi kan stråla från magnetronen eller från annan mikrovågsgenererande anordning om den används eller ansluts felaktigt. Alla anslutningar för mikrovåg, såsom flänsar och tätningar måste vara betryggande ur säkerhetssynpunkt. Starta aldrig anordningen utan mikrovågsabsorberande belastning. Mikrovågsstrålning från en öppen vågledare eller antenn har sådan strålningstäthet att uppenbar skaderisk föreligger.

ADVARSEL FOR
MIKROBØLGESTRALING

Mikrobølgeenergi kan stråle fra magnetronen eller annen mikrobølgeproduserende anordning ved feilkopling eller feil bruk. Alle mikrobølgeinntak og -uttaksforbindelser, flenser og pakninger, må være sikkerhetsmessig betryggende utført. Anordningen må aldri startes uten mikrobølgeabsorberende belastning. Se aldri inn mot en åpen bølgeleder eller antenne mens apparatet er i drift.

FORSIGTIG
MIKROBØLGESTRÅLING

Undgå at blive udsat for stråling fra mikrobølgegeneratoren eller andre dele som fører mikrobølgeenergi.

PRECAUZIONI PER EVITARE L'EVENTUALE ECCESSIVA ESPOSIZIONE ALLE MICROONDE

(a) **NON** cercare di far funzionare questo forno con lo sportello aperto: ciò può causare l'esposizione nociva alle microonde. È importante non danneggiare o manomettere i dispositivi di sicurezza.
(b) **NON** porre alcun oggetto fra il lato anteriore del forno e lo sportello o permettere il depositarsi di sporcizia o residui sulle superfici di tenuta.
(c) **NON** usare un forno danneggiato. È molto importante che lo sportello del forno si chiuda bene e che non vi siano danni a: (a) sportello (piegato); (b) cardini e dispositivi di chiusura (rotti o allentati); (c) guarnizioni dello sportello e delle superfici di tenuta.
(d) Il forno va regolato o riparato **ESCLUSIVAMENTE** da personale d'assistenza debitamente qualificato.

VOORZORGSMAATREGELEN TER VOORKOMING VAN MOGELIJKE BLOOTSTELLING AAN OVERMATIGE MICROGOLFENERGIE

(a) Probeer **NIET** om deze magnetron met de deur open te gebruiken. daar gebruik met open deur schadelijke blootstelling aan microgolfenergie ten gevolge kan hebben. Het is belangrijk dat u de veiligheidssluitingen nooit onklaar maakt of ermee knoeit.
(b) Plaats **GEEN** voorwerpen tussen de voorkant van de oven en de deur. Zorg dat geen vuil of schoonmaakmiddel op de sluitvlakken achterblijft.
(c) Gebruik de magnetron **NIET** indien hij beschadigd is. Het is vooral belangrijk dat de deur goed sluit en dat er geen beschadigingen zijn aan: (a) de deur (verbogen), (b) de scharnieren en sloten (gebroken of los), (c) de deurdafichtingen en sluitvlakken.
(d) De magnetron mag **UITSLUITEND** door daartoe bevoegd servicepersoneel bijgesteld en gerepareerd worden.

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Important Safety Information

⚠ CAUTION

Read the following information to avoid possible exposure to microwave radiation:

The basic design of the Amana and Menumaster microwave ovens make it an inherently safe device to both user and servicer. However, there are some precautions which should be followed when servicing the microwave oven to maintain this safety. These are as follows:

1. Always operate the unit from an adequately earthed outlet. Do not operate on a two-wire extension cord.
2. Before servicing the unit (if unit is operable), perform the microwave leakage test.
3. The oven should never be operated if the door does not fit properly against the seal, the hinges or hinge bearings are damaged or broken; the choke is damaged, (pieces missing, etc.); or any other visible damage can be noted. Check the choke area to ensure that this area is clean and free of all foreign matter.
4. If the oven operates with the door open and produces microwave energy, take the following steps.
   A. Tell the user not to operate the oven.
   B. Contact Maytag immediately.
5. Always have the oven disconnected when the outer case is removed except when making the "live" tests called for in this Service Manual. Do not reach into the equipment area while the unit is energized. Make all connections for the test and check them for tightness before plugging the cord into the outlet.
6. Always earth the capacitors on the magnetron filter box and H. V. Capacitor with an insulated-handle screwdriver before working in the high voltage area of the equipment compartment. Some types of failures will leave a charge in these capacitors and the discharge could cause a reflex action which could make you injure yourself.
7. In the area of the transformer, capacitor, diode, and magnetron there is HIGH VOLTAGE. When the unit is operating, keep this area clean and free of anything which could possibly cause an arc or earthing, etc.
8. Do not for any reason defeat the interlock switches. There is no valid reason for this action at any time; nor will it be condoned by Maytag.
9. IMPORTANT: Before returning a microwave to a customer, check for proper switch interlock action. The primary and secondary switches MUST actuate when the door is opened. The monitor switch MUST close at a $^{1}/_{64}$–inch (0.5 mm) when the door is opened.
10. Before returning a microwave to a customer, verify the door spacing is reasonably uniform along the top, bottom, and sides, and that it measures $^{1}/_{64}$–inch (0.5 mm) or less.
11. The Amana or Menumaster microwave oven should never be operated with:
    - Any components removed and/or bypassed.
    - Any of the safety interlocks found to be defective.
    - Any of the seal surfaces defective, missing, or damaged.
12. To ensure that the unit does not emit excessive microwave leakage and to meet the Department of Health Human Service guidelines, check the oven for microwave leakage using leakage monitor as outlined in the instructions. The maximum leakage level allowed is 4mW/cm^2.
13. If servicer encounters an emission reading over 4 mw/cm^2 the servicer is to cease repair and contact the Maytag Service Department immediately for further direction. Maytag will contact the proper Government Agency upon verification of the test results.

Important Safety Information

⚠ WARNING

Precautions to be observed before and during servicing to avoid possible exposure to excessive microwave energy, or electrical shock, disconnect power to oven.

(A) Do not operate or allow oven to be operated with door open.

(B) Make the following safety checks on all ovens to be serviced before activating the magnetron or other microwave source, and make repairs as necessary:

- Interlock operation
- Proper door closing
- Seal and sealing surfaces (arcing, wear, and other damage)
- Damage to or loosening of hinges and latches
- Evidence of dropping or abuse

(C) Before turning on microwave power for any service test or inspection within the microwave generating compartments, check the magnetron, waveguide or transmission line, and cavity for proper alignment, integrity, and connections.

(D) Any defective or misadjusted components in the interlock, monitor, door seal, and microwave generation and transmission systems shall be repaired, replaced or adjusted by procedures described in this manual before oven is released to the consumer.

(E) Check microwave leakage to verify compliance with the federal performance standard. This should be performed on each oven prior to release to the consumer.

Wiring

Good service practice is to never route wiring over terminals and/or sharp edges. This applies to any wiring without regard to the circuit voltage. Wire insulation material and thickness is designed and regulated for electrical spacing purpose only, but cannot always be relied upon because of possible cuts and/or abrasions, which can occur during servicing.

⚠ WARNING

To avoid risk of electrical shock, personal injury or death, make sure these earthing instructions are followed.

Earthing Instructions

⚠ WARNING

Do not remove earthing prong when installing earthed appliance in a home or business that does not have three wire earthing receptacle, under no condition is earthing prong to be cut off or removed. It is the personal responsibility of the consumer to contact a qualified electrician and have properly earthed three prong wall receptacle installed in accordance with appropriate electrical codes

Should a two prong adapter plug be required temporarily, it is the personal responsibility of the consumer to have it replaced with properly earthed three prong receptacle or the two prong adapter properly earthed by a qualified electrician in accordance with appropriate electrical codes.

Servicing of Earthed Products

The standard accepted color coding for earthing wires is GREEN or GREEN WITH YELLOW STRIPE. These earth leads are NOT to be used as current carrying conductors. It is extremely important that the technician replace any and all earths prior to completion of the service call. Under no condition should earth wire be left off causing a potential hazard to technicians and consumer.

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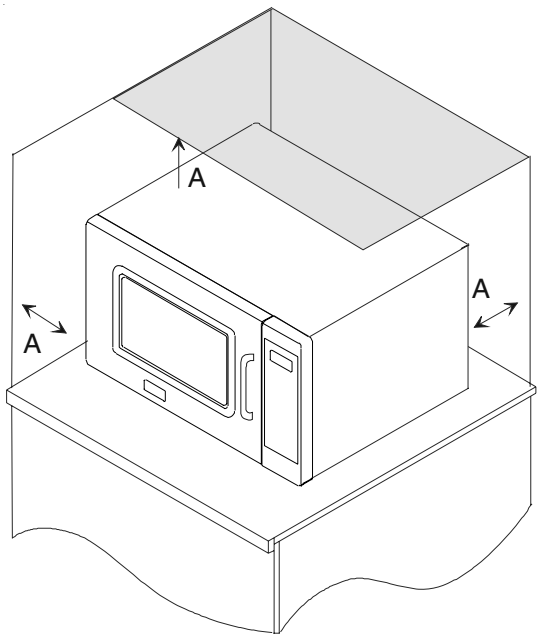
General Information

Unpacking Equipment

- Inspect equipment for damage such as dents in door or dents inside oven cavity.
- Report any dents or breakage to source of purchase immediately. Do not attempt to use oven if damaged.
- Remove all materials from oven interior.

Equipment Placement

- Do not install equipment next to or above source of heat, such as pizza oven or deep fat fryer. This could cause microwave oven to operate improperly and could shorten life of electrical parts.
- Do not block or obstruct air filter. Allow access for cleaning.
- Install on level countertop surface.



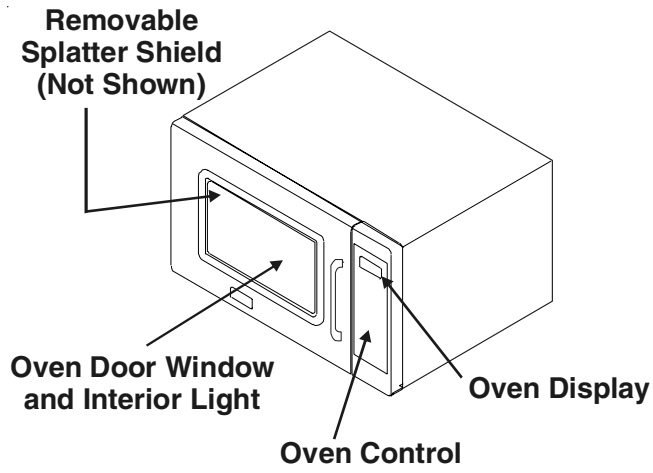
A—Allow at least 1½ inches / 3.81 centimeters of clearance around top and sides of equipment. Proper air flow around equipment cools electrical components. With restricted air flow, oven may not operate properly and life of electrical parts is reduced.

Radio Interference

Microwave operation may cause interference to radio, television, or similar equipment. Reduce or eliminate interference by doing the following:

- Clean door and sealing surfaces of oven according to instructions in “Care and Cleaning” section.
- Place radio, television, etc. as far as possible from oven.
- Use a properly installed antenna on radio, television, etc. to obtain stronger signal reception.

Oven Features



Model Identification

- For Amana product call 1-866-426-2621 or visit the Web Site at www.amanacommercial.com

When contacting for service support, provide product information located on rating plate. Record the following:

Model Number: _____
Manufacturing Number: _____
Serial or S/N Number: _____
Date of purchase: _____
Dealer’s name and address: _____

Service

Keep a copy of sales receipt for future reference or in case warranty service is required. To locate an authorized servicer:

- For Amana product call 1-866-426-2621 or visit the Web Site at www.amanacommercial.com

Warranty service must be performed by an authorized servicer. We also recommend contacting an authorized servicer, if service is required after warranty expires.

Parts and Accessories

Purchase replacement parts and accessories over the phone. To order accessories for your product contact your local product distributor or vist the Web site at www.amanacommercial.com.

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Troubleshooting Procedures

When you get a complaint from customers, evaluate the complaint carefully. If the following symptoms apply, instruct the customer in the proper use of the microwave oven. This can eliminate an unnecessary service call.

⚠ CAUTION

- Verify proper grounding before checking for trouble.
- Be careful of the high voltage circuit.
- Discharge the high voltage capacitor.
- When checking the continuity of the switches or of the high voltage transformer, disconnect one lead wire from these parts and then check continuity with the AC plug removed. To do otherwise may result in a false reading or damage to your meter.
- Do not touch any part of the circuit on the controller, since static electric discharge may damage the control panel. Always touch yourself to earth while working on this panel to discharge any static charge built up in your body.

Condition	Cause	Remedy
Microwave oven does not work.	• Inserting multiple plugs into one outlet and using them at the same time (blown fuse or breaker). • Microwave oven plug is not inserted tightly.	• Avoid using other electrical appliances when you use the microwave oven. • Insert microwave oven plug securely.
Output power is too low.	• Low AC input voltage. • Food temperature is too low.	• Use the microwave oven at adequate line voltage. • This may not be a defect. It is possible that the food should be cooked for a longer time period.
Sparks occur.	• Using metallic ware and allowing it to touch the oven wall. • Ceramic ware trimmed in gold or silver is used.	• Do not use metallic ware for cooking. • Do not use any type of cookware with metallic trimming.
Uneven cooking.	Inconsistent food thickness, inconsistent fat or moisture distribution within the food products.	• Use plastic wrap or lid. • Stir once or twice while cooking soup, cocoa, milk, etc.

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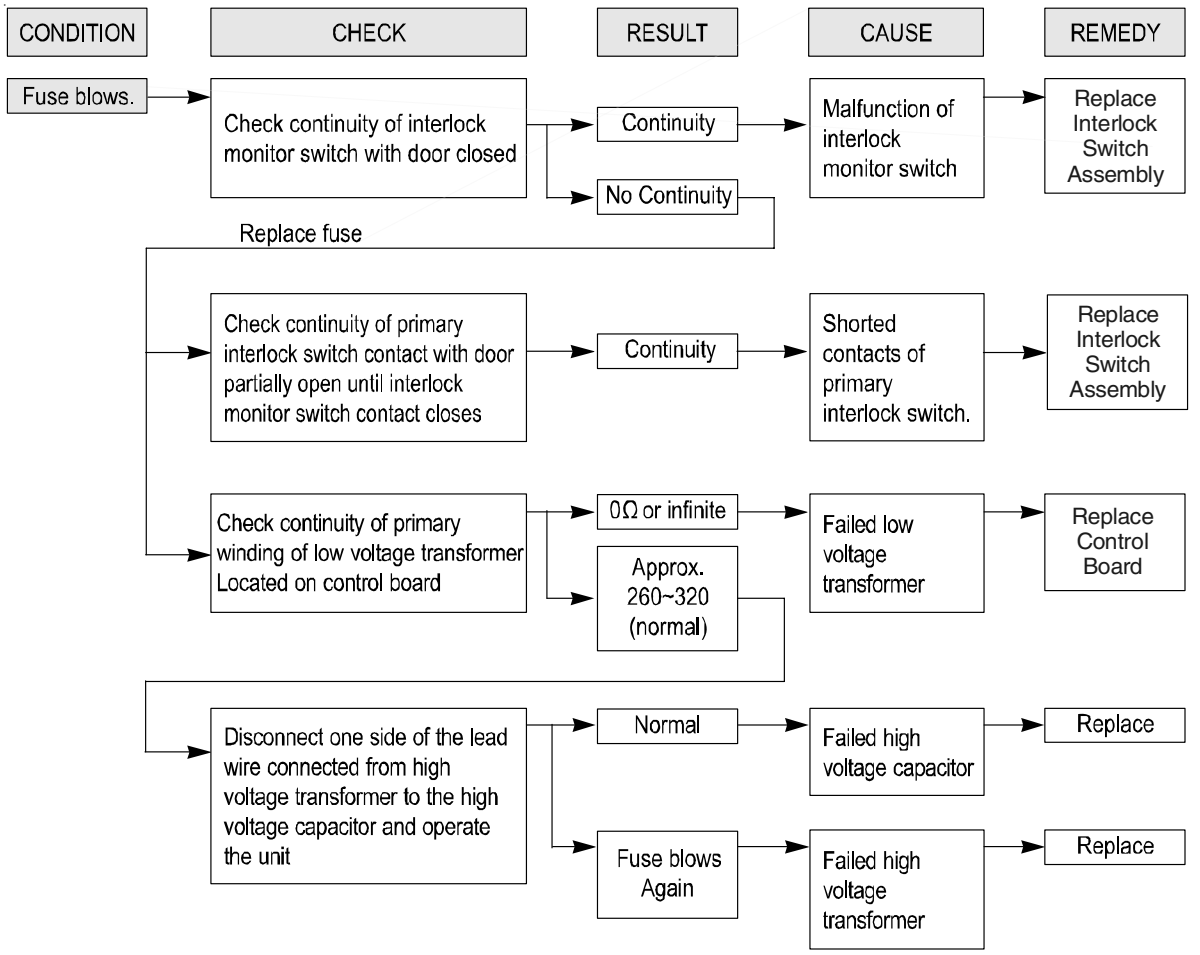
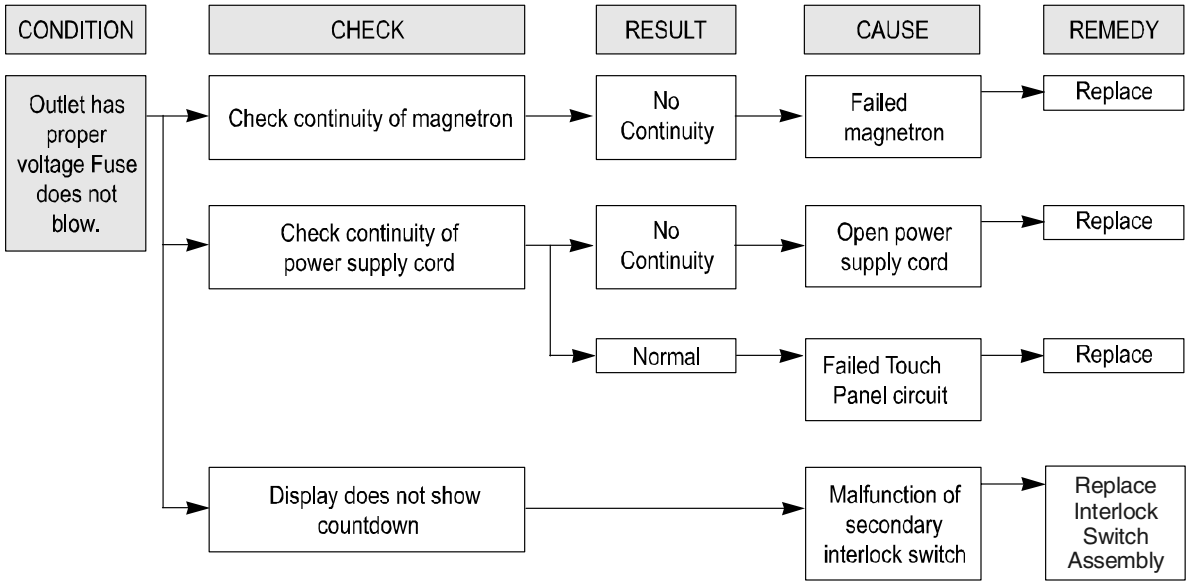
Troubleshooting Procedures (Electronic Models)

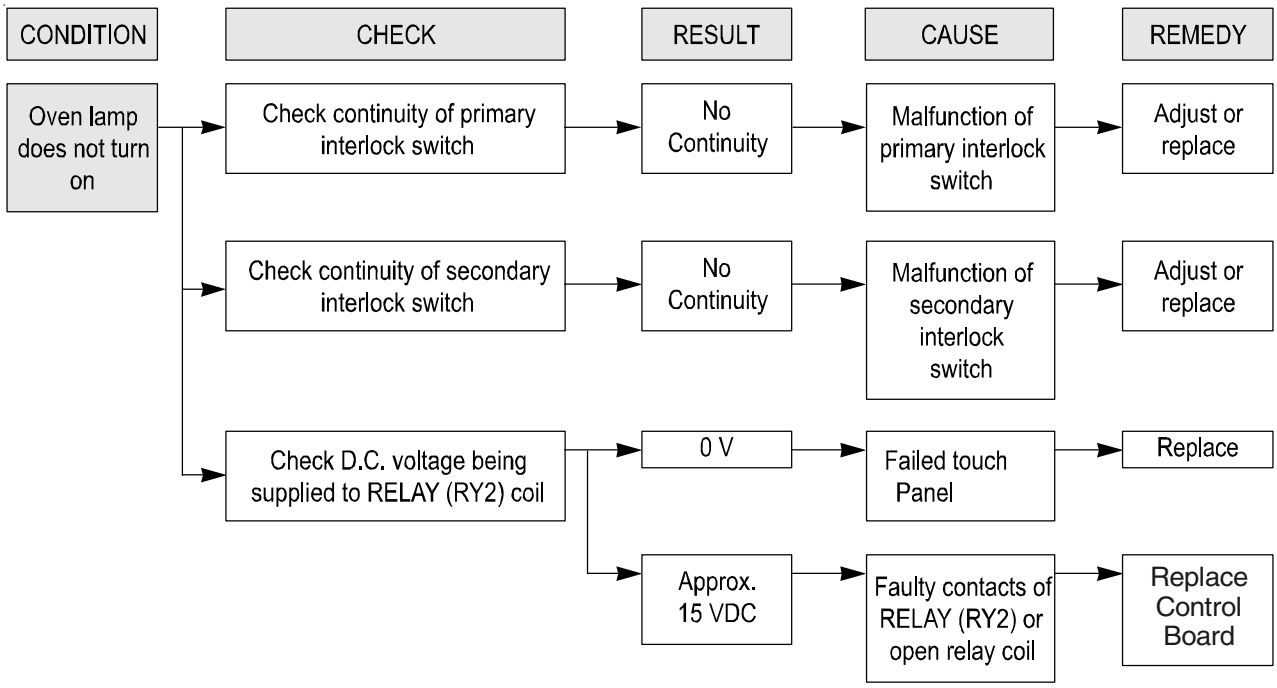
Trouble 1: Oven does not operate at all, no inputs can be accepted.


CONDITION
CHECK
RESULT
CAUSE
REMEDY
Fuse blows.
Check continuity of interlock monitor switch with door closed
Continuity
Malfunction of interlock monitor switch
Replace Interlock Switch Assembly
No Continuity
Replace fuse
Check continuity of primary interlock switch contact with door partially open until interlock monitor switch contact closes
Continuity
Shorted contacts of primary interlock switch.
Replace Interlock Switch Assembly
Check continuity of primary winding of low voltage transformer Located on control board
0Ω or infinite
Failed low voltage transformer
Replace Control Board
Approx. 260~320 (normal)
Disconnect one side of the lead wire connected from high voltage transformer to the high voltage capacitor and operate the unit
Normal
Failed high voltage capacitor
Replace
Fuse blows Again
Failed high voltage transformer
Replace



Troubleshooting Procedures (Electronic Models)

Trouble 2: Display shows all figures selected, but does not start cooking even though desired program and time is set when the START pad is pressed.



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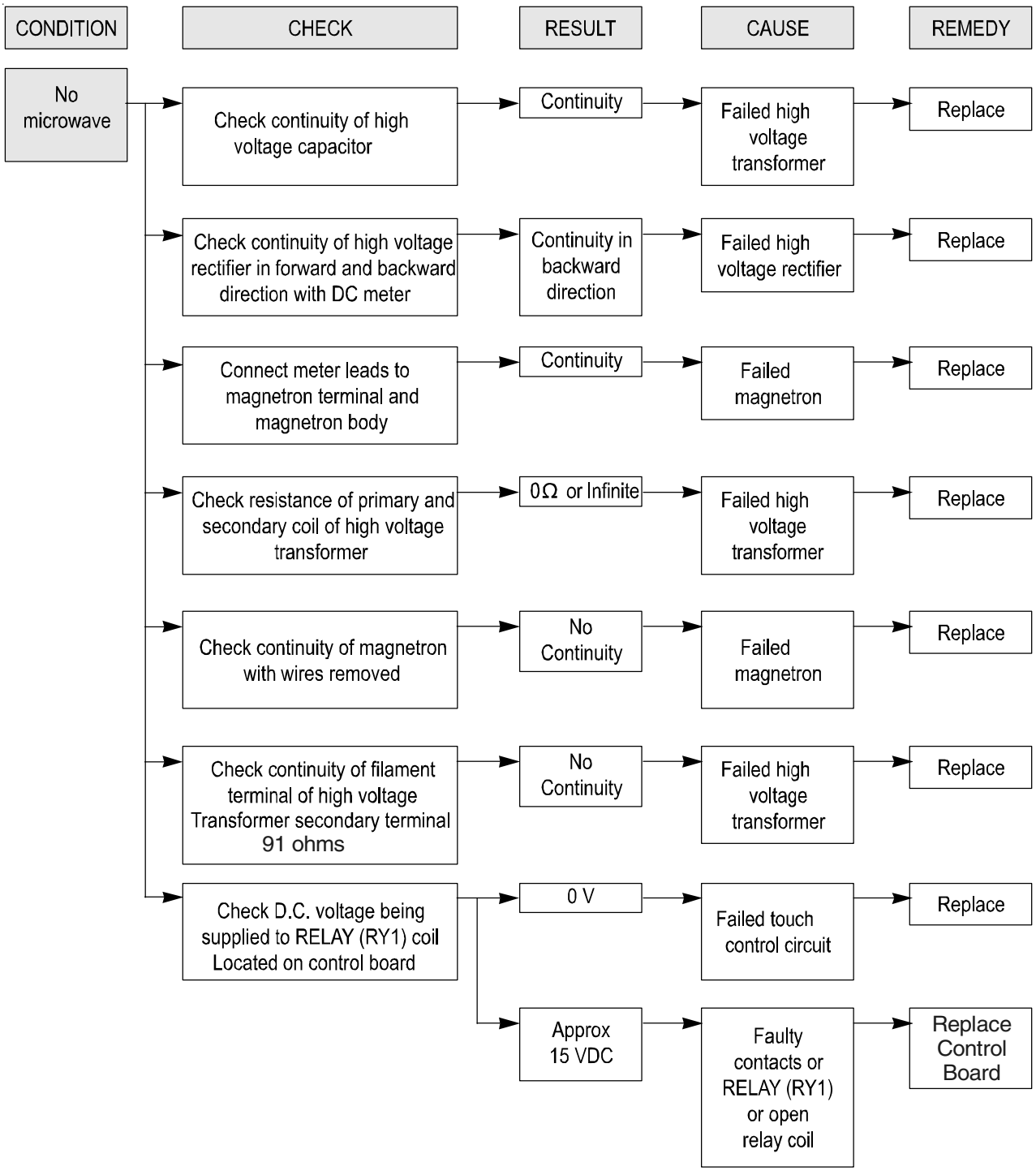
Troubleshooting Procedures (Electronic Models)

Trouble 3: No microwave when fan motor operates.

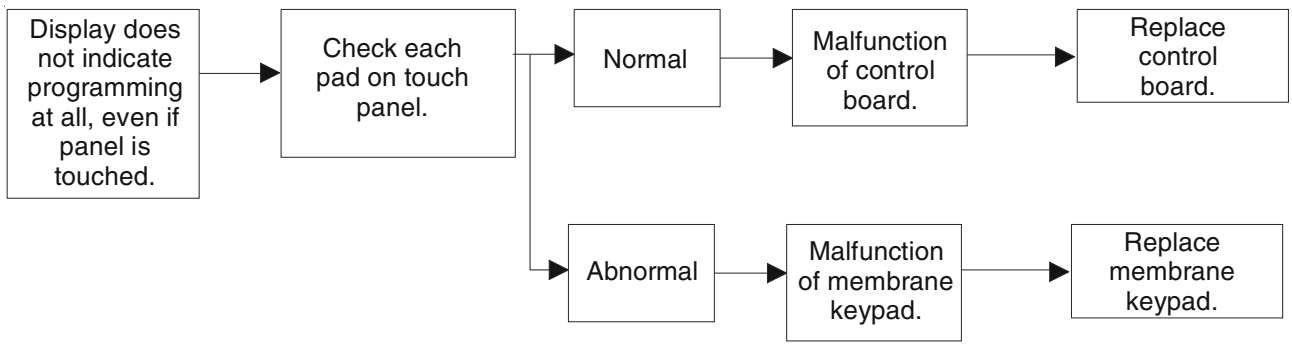


Troubleshooting Procedures (Electronic Models)

Trouble 4: The following visual conditions indicate a probable failed control circuit or membrane switch assembly.

1. Incomplete segments.
   - Segment missing.
   - Partial segment missing.
   - Digit flickering (Note: Slight flickering is normal.)
   - " :0" does not display when power is on.
2. A distinct change in the display is not on, when it should be.
3. One or more digits in the display are not on, when it should be.
4. Display indicates a number different from one touched, for example, key in 5 and 3 appears in the display.
5. Specific numbers (for example 7 or 9) will not display when key pad is touched.
6. Display does not count down or up with time cooking or clock operation.
7. Oven is programmed and cooks normally, but no display is indicated.
8. Display obviously jumps in time while counting down.
9. Display counts down too fast while cooking.
10. Display does not show the time of day when clear pad is touched.
11. Oven lamp and turntable motor do not stop, although cooking is finished. Check if RELAY 2 contacts close, if they are closed, replace touch control circuit.

NOTE: Before following the particular steps listed above for the touch pad, verify continuity of each wire harness between the touch pad and printed circuit board.


Display does not indicate programming at all, even if panel is touched.
Check each pad on touch panel.
Normal
Malfunction of control board.
Replace control board.
Abnormal
Malfunction of membrane keypad.
Replace membrane keypad.

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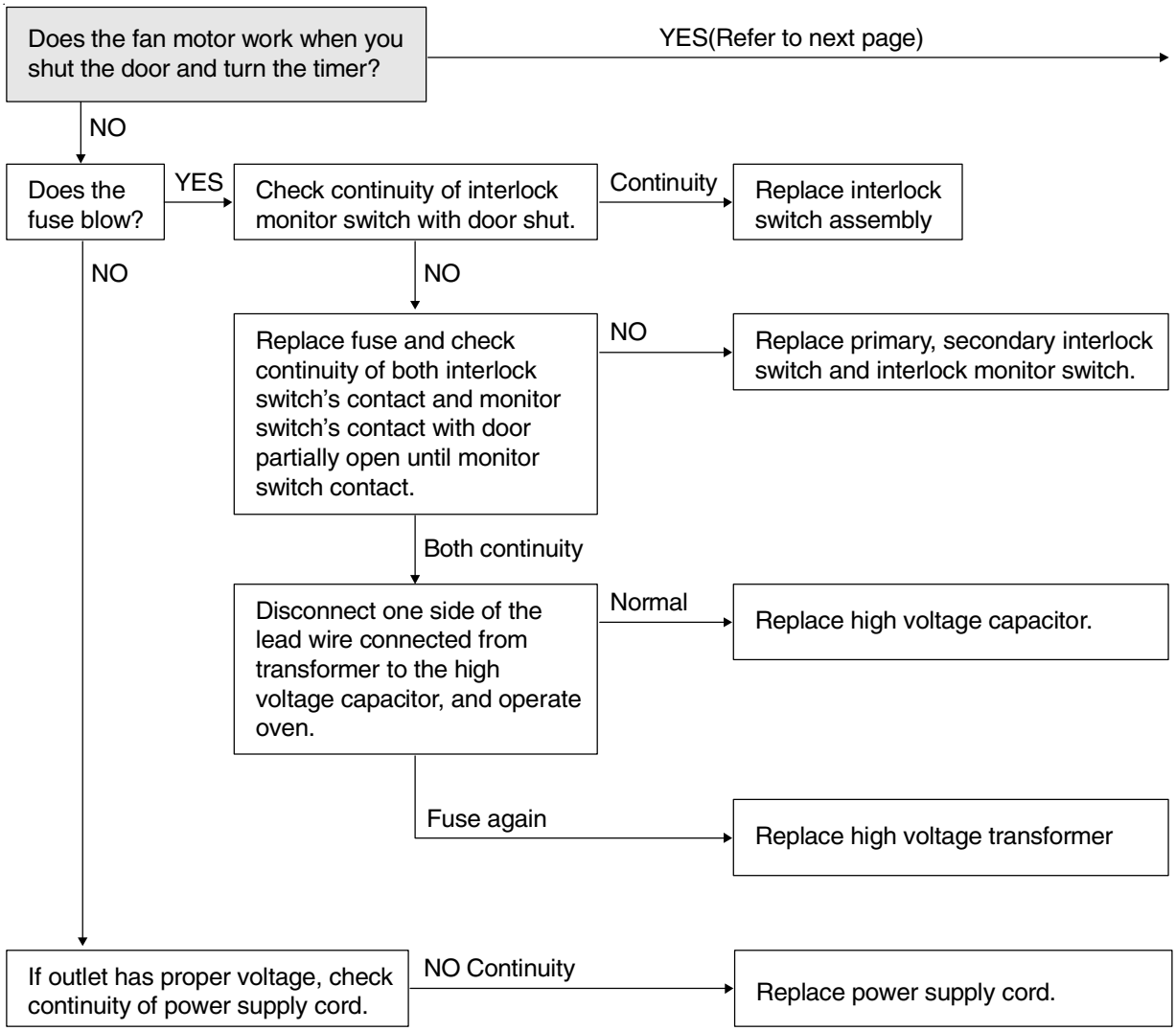
Troubleshooting Procedures (Dial Models)

When you get a complaint from customers, evaluate the complaint carefully. If the following symptoms apply, instruct the customer in the proper use of the microwave oven. This can eliminate an unnecessary service call.

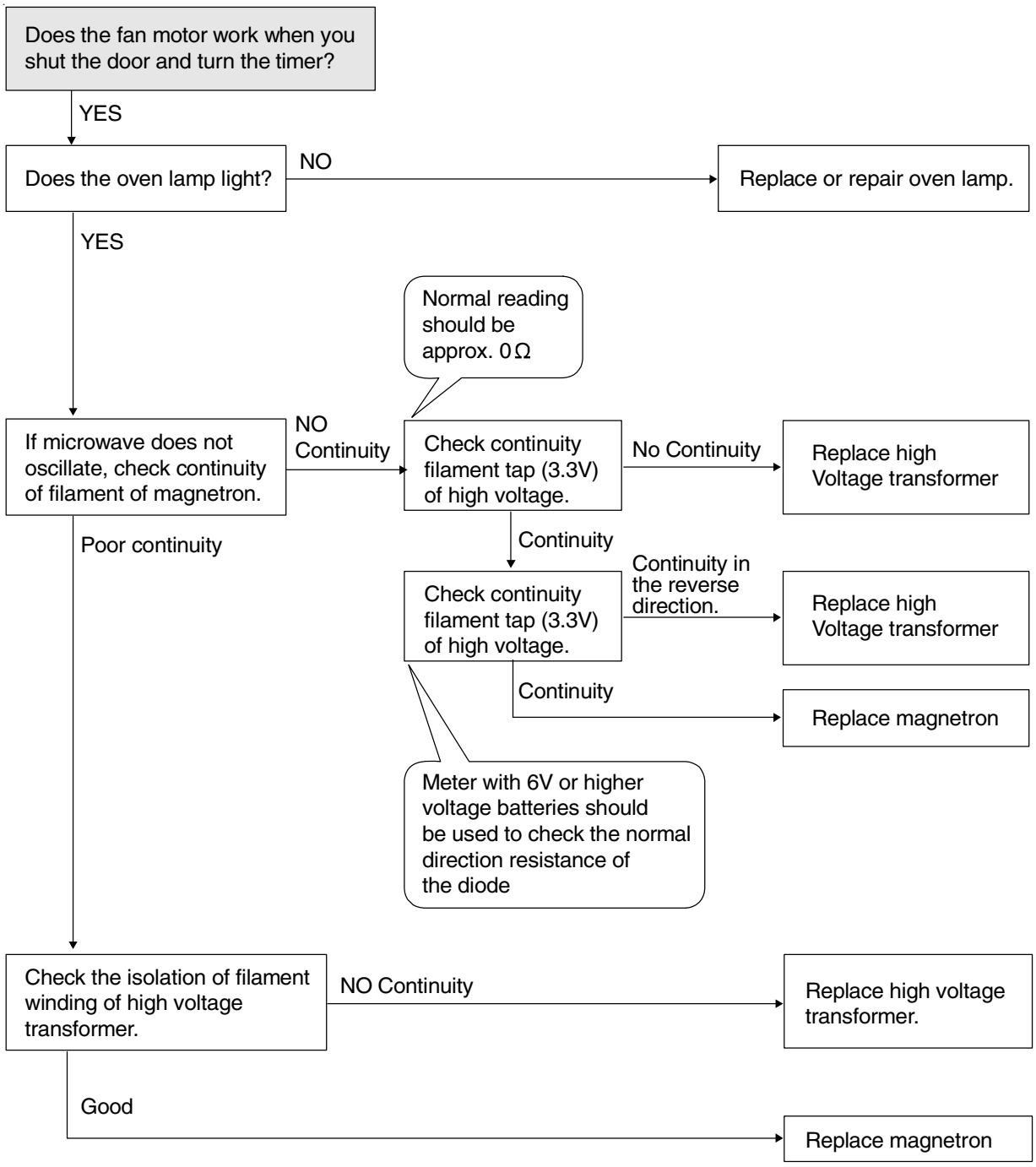
⚠ CAUTION

- Verify proper grouding before checking for trouble.
- Be careful of the high voltage circuit.
- Discharge the high voltage capacitor.
- When checking the continuity of the switches or of the high voltage transformer, disconnect one lead wire from these parts and then check continuity with the AC plug removed. To do otherwise may result in a false reading or damage to your meter.
- Do not touch any part of the circuit on the controller, since static electric discharge may damage the control panel. Always touch yourself to earth while working on this panel to discharge any static charge built up in your body.

Trouble 1: Oven does not operate at all, no inputs can be accepted.


Does the fan motor work when you shut the door and turn the timer?
YES(Refer to next page)
NO
Does the fuse blow?
YES
Check continuity of interlock monitor switch with door shut.
Continuity
Replace interlock switch assembly
NO
NO
Replace fuse and check continuity of both interlock switch's contact and monitor switch's contact with door partially open until monitor switch contact.
NO
Replace primary, secondary interlock switch and interlock monitor switch.
Both continuity
Disconnect one side of the lead wire connected from transformer to the high voltage capacitor, and operate oven.
Normal
Replace high voltage capacitor.
Fuse again
Replace high voltage transformer
If outlet has proper voltage, check continuity of power supply cord.
NO Continuity
Replace power supply cord.

Troubleshooting Procedures (Dial Models)


Does the fan motor work when you shut the door and turn the timer?
YES
Does the oven lamp light?
NO
Replace or repair oven lamp.
YES
Normal reading should be approx. 0 Ω
If microwave does not oscillate, check continuity of filament of magnetron.
NO Continuity
Check continuity filament tap (3.3V) of high voltage.
No Continuity
Replace high Voltage transformer
Poor continuity
Continuity
Check continuity filament tap (3.3V) of high voltage.
Continuity in the reverse direction.
Replace high Voltage transformer
Continuity
Replace magnetron
Meter with 6V or higher voltage batteries should be used to check the normal direction resistance of the diode
Check the isolation of filament winding of high voltage transformer.
NO Continuity
Replace high voltage transformer.
Good
Replace magnetron

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Service Information

WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect power to oven and discharge capacitor before servicing, unless testing requires power.

Proper Handling of Magnetron Tubes

CAUTION

A magnetron tube, like a radio or television tube must be handled with a reasonable amount of care. When handling a tube, always handle by the housing only. Use caution not to touch or strike the ceramic portion at the top. The carton used to ship service replacement tubes is reusable.

Magnetron Failure Modes

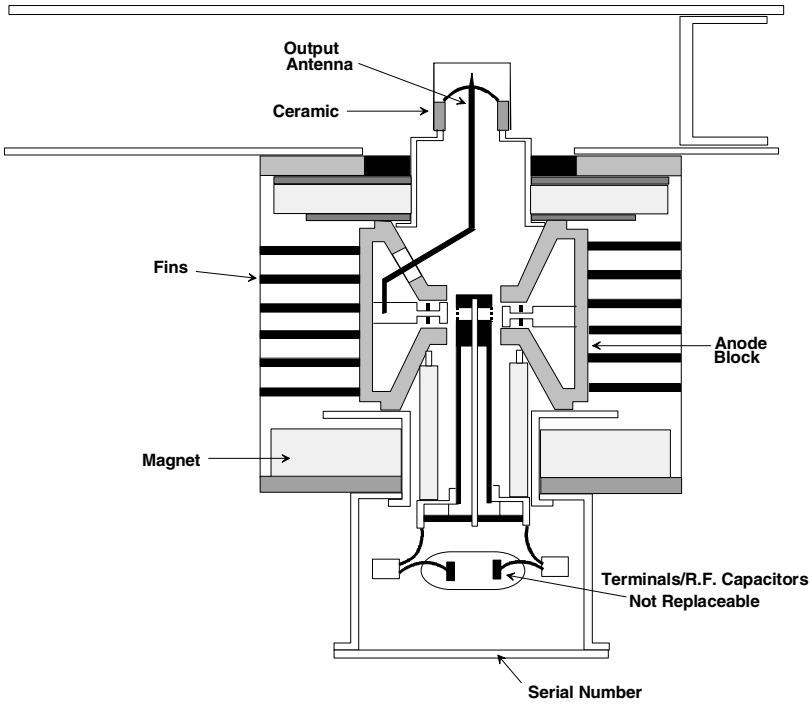
Magnetron failures that have been identified are generally grouped into categories shown below.

1. **Shorted**

Air - This is a case where the tube has had the vacuum envelope destroyed and air has entered the tube. This will cause internal arcing and high secondary current if high voltage is applied.

R.F. Capacitors - May short to chassis. This condition will also cause loss of high voltage.

2. **Open Heater (Filament)** - Can be determined by a ohmmeter when transformer leads are disconnected. Resistance is normally less than one ohm; filament does not short internally. Any tube removed should be checked since usage tends to make the filament more fragile. Later handling and shipping may open the filament and thereby mask the true failure mode when checked at the factory.
3. **Low Power** - Caused by "wearout" of the emission characteristics of the directly heated cathode. Symptoms are: (1) tube current will take longer to get to operating point then a new tube (normally about 2 - 3 seconds), (2) tube current does not get high enough to cause the tube to oscillate with normal line voltage, (3) oven produces low power into a load, two-thirds or less than normal.
4. **Physical Damage** - Caused by mishandling of magnetron tube.



Microwave Leakage Testing

⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect power to oven and discharge capacitor before servicing, unless testing requires power.

⚠ WARNING

Check for radiation leakage after servicing. Should the leakage be more than 4 mW/cm^2 inform Maytag immediately. After repairing or replacing any radiation safety device, keep a written record for future reference, as required by D.H.H.S. and HEW regulations. This requirement must be strictly observed. In addition, the leakage reading must be recorded on the service repair ticket while in the customer's home.

Equipment

- Electromagnetic radiation monitor
- 600 cc glass beaker

Procedure for Measuring Radiation Leakage

Note before measuring:

- Do not exceed meter full scale deflection. Leak monitor should initially be set to the highest scale.
- To prevent false readings the test probe should be held by the grip portion of the handle only.
- The scan speed is equal to one inch per antenna revolution or one inch per second if antenna speed is unknown.
- Areas to be checked are all door seal areas and any venting parts.
- Leakage with the outer panel removed ...4mW/cm^2 or less.
- Leakage for fully assembled oven with door normally closed ...4 mW/cm^2 or less.
- Leakage for a fully assembled oven (before the latch switch (primary) is interrupted) while pulling the door ... 4 mW/cm^2 or less.

1. Pour 275 cc ±15 cc (9 oz ±1/2 oz) of 20°C ± 5°C (68°F ± 9°F) water in a beaker which is graduated to 600 cc and place the beaker in the center of oven.
2. Set the radiation monitor to 2450 MHz and use it following the manufacturer's recommended test procedure to assure correct results.
3. While measuring the leakage, always use the two inch (5 cm) spacer supplied with the probe.
4. Press the start pad or turn on the timer and with the magnetron oscillating, measure the leakage by holding the probe perpendicular to the surface being measured.

Measurement with the Outer Panel Removed

⚠ WARNING

Avoid contacting any high voltage components.

Whenever you replace the magnetron, measure for radiation leakage before the outer panel is installed and after all necessary components are replaced or adjusted. Special care should be taken in measuring around the magnetron.

Measurement with a Fully Assembled Oven

After all components including the outer panel are fully assembled, measure for radiation leakage around the door periphery, the door viewing window, the exhaust opening, and air inlet openings.

Record Keeping and Notification After Measurement

1. After any adjustment or repair to a microwave oven, a leakage reading must be taken. Record this leakage reading on the repair ticket even if it is zero.
2. A copy of the repair ticket and the microwave leakage reading should be kept by the repair facility.

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Troubleshooting

WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect power to oven and discharge capacitor before servicing, unless testing requires power.

Operating Instructions for the Holaday HI1501, HI1510, and HI1710

Purpose of these monitors is to check radiation leakage around microwave oven door or other places where radiation could possibly occur.

Instrument measures radiation leakage in milliwatts per square centimeters (mW/cm^2). Probe should be used with the 2" (5 cm) cone spacer. Water load of 275 cc. (approximately 1 1/3 cup), is to be placed in the oven and used as a load during leakage tests.

Operate the instrument on its internal 9 Volt battery power supply. “Range” switch is used on low and high while using test probe. On an oven with an unknown leakage, use high scale then switch to low scale and test for low leakage. “Bat Test” switch is used to check the battery and probe on the Holaday Instruments. If either is faulty, meter needle will not read above “Test Minimum” or battery mark on meter. Holaday Instrument has a probe test switch position. Meter needle must indicate in the “OK probe test” portion of the scale when in this position. Zero control is used to zero the needle. “ON-OFF” switch provides a means of turning the operating voltage on or off. “Range Multiplier” switch provides a means of selection either 0-2 or 0-10 and 0-100 on the Holaday Instruments sensitivity ranges.

Test probe must be held by the grip portion of the handle, otherwise a false reading may result if operators hand is between the handle and probe.

If oven is likely to have a large amount of leakage, approach oven slowly with the probe, while observing meter. This is achieved by holding the probe two or three feet from oven surface or gap between door and oven body while observing meter. When high leakage is expected, do not move probe horizontally along the oven surface. This could cause possible probe burn-out. Greatest leakage is generally found at the corners. After maximum leakage is established to be within the meter scale range, then probe may be moved horizontally around the door surface.

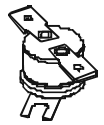
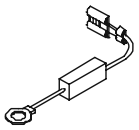
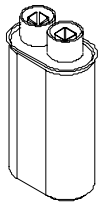
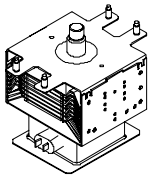
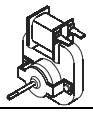
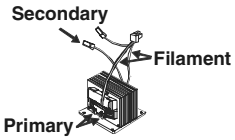
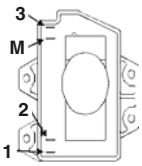
Hold probe perpendicular to cabinet door. Place cone of probe on the door and/or cabinet door seam and move along the seam. If leakage of the oven is unknown, move probe slowly. Proceed with care in order not to exceed a full scale reading of meter. When testing near a corner or access area of door, keep probe perpendicular to the areas making sure probe end at the base of the cone does not get closer than 2” (5cm) to any metal. If it does, an erroneous reading may result.

Always use the 2” (5cm) spacer with probe. Also, always proceed carefully in areas of high leakage or probe can be accidentally burned-out. Rotating antenna causes high peaks of energy. Although meter has averaging capabilities, probe will react instantaneously to peak power changes which will cause burn-out.

Testing Procedures

⚠ WARNING

To avoid risk of electrical shock, personal injury or death; disconnect power to oven and discharge capacitor before servicing, unless testing requires power.

Illustration	Component	Testing	Results
	Thermal cutout	Disconnect all wires from TCO. Measure resistance across terminals. Cavity TCO..... Magnetron TCO.....	 Closed at 50ºC (122ºF) and Opens at 85ºC (185ºF) Closed at 115ºC (249ºF) and Opens at 160ºC (320ºF)
	Diode	**Discharge Capacitor** Remove diode lead from capacitor and connect ohmmeter. Reverse leads for second test.	Infinite resistance should be measured in one direction and 50KΩ or more in the opposite direction. **NOTE:** Ohmmeter must contain a battery of 6 volts minimum.
	Capacitor	**Discharge Capacitor** Remove wires from capacitor terminals and connect ohmmeter, set on highest resistance scale to terminals. Also check between each terminal and capacitor case.	 Between Terminals: Meter should momentarily deflect towards zero then return to over 5 MΩ. If no deflection occurs, or if continuous deflection occurs, replace capacitor. Terminal to Case: Infinite resistance
	Magnetron	**Discharge Capacitor** Remove wires from magnetron and connect ohmmeter to terminals. Also check between each terminal and ground.	Between Terminals: Less than 1 Ω Each terminal to ground measures Infinite resistance. **NOTE:** This test is not conclusive. If oven does not heat and all other components test good replace the magnetron and retest.
	Blower motor	Remove all wires from motor. Measure resistance across coil	 Approximately 96 Ω
	Stirrer motor	Remove all wires from motor. Measure resistance across terminals	 Approximately 14.7K Ω
	Transformer	**Discharge Capacitor** Remove all wires from terminals. Measure resistance from: Primary ..... Filament ..... Secondary to Ground screw on transformer stack.....	 Less than <1 Ω Less than <1 Ω Approximately 91 Ω
	Dial timer	Remove leads from timer contact terminals. Measure resistance of following terminals: 1 to 3—Timer in OFF position ..... 1 to 3—Timer in ON position ..... 2 to M—Timer in OFF or ON position.....	If timer does not indicate readings below, replace timer. Infinite Ω Approximately <1 Ω Approximately 13.6 KΩ (timer motor)
	Lamp and receptacle	Test continuity of receptacle terminals.	Indicates continuity with bulb installed.
	Wire Harness	Test continuity of wires	Indicates continuity
	Electronic control board	Test interlock assembly switches. Test cavity TCO.	If interlock switch assembly and cavity TCO is operating correctly. If the control board still has no display, replace control board.

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Testing Procedures

⚠ WARNING

To avoid risk of electrical shock, personal injury or death; disconnect power to oven and discharge capacitor before servicing, unless testing requires power.

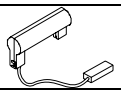
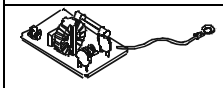
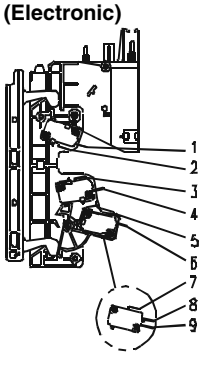
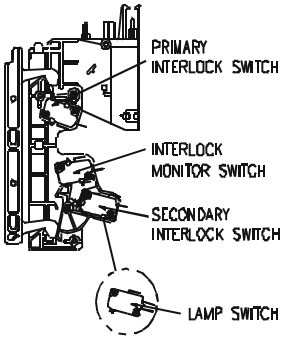
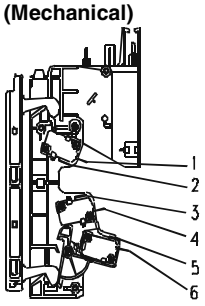
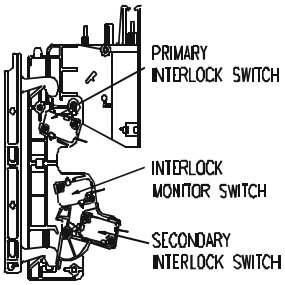
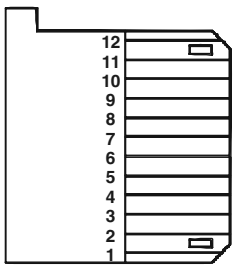
Illustration	Component	Testing	Results
	High voltage fuse	Test continuity of terminals.	Indicates continuity, if not replace fuse.
	Slow acting relay assembly	Disconnect black wire from relay and measure voltage from neutral (blue wire on Filter Assembly) to relay terminal with black wire removed. Power Out terminals	 230 VAC If no power out, replace assembly
	Fuse block / Filter assembly	Power In terminals..... Power Out terminals	230 VAC 230 VAC If no power in, check power outlet If no power out, check fuses
(Electronic) 	Interlock switch assembly 	Disconnect wires to switch. With door open measure resistance from: Monitor – Terminals 3 - 4 ..... Primary – Terminals 1 - 2..... Secondary – Terminals 5 - 6 ..... Lamp – Terminals 7 – 8 ..... Lamp – Terminals 7 – 9 ..... With door closed measure resistance from: Monitor – Terminals 3 - 4 ..... Primary – Terminals 1 - 2..... Secondary – Terminals 5 - 6 ..... Lamp – Terminals 7 – 8 ..... Lamp – Terminals 7 – 9 ..... **After verifying or replacing the module, re-connect wires to switch and check operation of monitor circuit before operating the oven.**	 Indicates continuity Infinite Ω Infinite Ω Infinite Ω Indicates continuity Infinite Ω Indicates continuity Indicates continuity Indicates continuity Infinite Ω
(Mechanical) 	Interlock switch assembly 	Disconnect wires to switch. With door open measure resistance from: Monitor – Terminals 3 - 4 ..... Primary – Terminals 1 - 2..... Secondary – Terminals 5 - 6 ..... With door closed measure resistance from: Monitor – Terminals 3 - 4 ..... Primary – Terminals 1 - 2..... Secondary – Terminals 5 - 6 ..... **After verifying or replacing the module, re-connect wires to switch and check operation of monitor circuit before operating the oven.**	 Indicates continuity Infinite Ω Infinite Ω Infinite Ω Indicates continuity Indicates continuity
	Error codes	E-20	Replace Control Board

Illustration	Component	Testing	Results		
	Keyboard assembly 	Continuity is indicated as 100 Ω and below.	**Pad**	**Trace**	**Measurement**
			10.....	1 & 8	Continuity
			9.....	3 & 9	Continuity
			8.....	2 & 9	Continuity
			7.....	1 & 9	Continuity
			6.....	7 & 8	Continuity
			5.....	6 & 8	Continuity
			4.....	5 & 8	Continuity
			3.....	4 & 8	Continuity
			2.....	3 & 8	Continuity
			1.....	2 & 8	Continuity
			STOP/RESET	4 & 9	Continuity
			START/+30 SEC.....	5 & 9	Continuity
			POWER LEVEL	6 & 9	Continuity
			DEFROST.....	7 & 9	Continuity
			CHECK PROGRAM	1 & 10	Continuity
			PROGRAM.....	2 & 10	Continuity
			QTY 2X	3 & 10	Continuity

Testing Procedures

⚠ WARNING

To avoid risk of electrical shock, personal injury or death; disconnect power to oven and discharge capacitor before servicing, unless testing requires power.

All Amana and Menumaster microwave oven power outputs are rated using the IEC705 standards. Using the IEC705 test method requires precision measurements and equipment that is not practical to be performed in the field. Using the test shown below will indicate if the oven performance is satisfactory.

Test equipment required:

- 1000 ml test container and thermometer (Amana power test kit R0157397 Fahrenheit / Menumaster power test kit M95D5 Celsius).
- Digital watch / watch with a second hand for use on ovens with electromechanical timers.

Important Notes:

- Low line voltage will cause low temperature rise / power output.
- Ovens must be on a dedicated circuit, properly grounded, and polarized. Other equipment on the same circuit may cause a low temperature rise / power output.
- This test and results are not a true IEC705 test procedures and are only intended to provide servicers with an easy means of determining if the microwave oven cooking output is correct.

Procedure

1. Fill the test container to the 1000 ml line with cool tap water.

NOTE: Water temperature should be approximately 60°F / 16°C

2. Using the thermometer, stir water for five to ten seconds; measure, and record the temperature (T1).
3. Place test container of water in the center of oven cavity and close door.
4. Heat the water for a 33-second full power cycle.

NOTE: Use a digital watch or a watch with a second hand for ovens with electromechanical timers.

5. At end of the cycle, remove test container. Using the thermometer, stir water for five to ten seconds and record temperature (T2).
6. Subtract the starting water temperature (T1) from the ending water temperature (T2) to obtain the temperature rise (ΔT).
7. If the temperature rise (ΔT) meets or exceeds the minimum, the test is complete. If the temperature rise (ΔT) fails to meet the minimum temperature rise, test the line voltage to verify it is correct. Then repeat steps 1 - 6 making sure to change the water. If the temperature rise (ΔT) fails to meet the minimum temperature rise again the oven will require service.

Minimum Temperature Rise at Thirty -Three (33) Seconds Run Time

ΔT (°F)	Cooking Power Output	ΔT (°F)	Cooking Power Output	ΔT (°C)	Cooking Power Output	ΔT (°C)	Cooking Power Output
10	1000	20	2000	5	1000	11	2000
11	1100	21	2100	5.5	1100	11.5	2100
12	1200	22	2200	6.5	1200	12	2200
14	1400	24	2400	7.5	1400	13	2400
17	1700	25	2500	9.5	1700	13.5	2500
18	1800	27	2700	10	1800	15	2700
19	1900	30	3000	10.5	1900	16.5	3000

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Disassembly Procedures

⚠ WARNING

To avoid the risk of electrical shock, personal injury, or death, disconnect power to oven and discharge the capacitors before following any disassembly procedure.

High voltage is present at the high voltage terminal of the high voltage transformer during any cooking cycle.

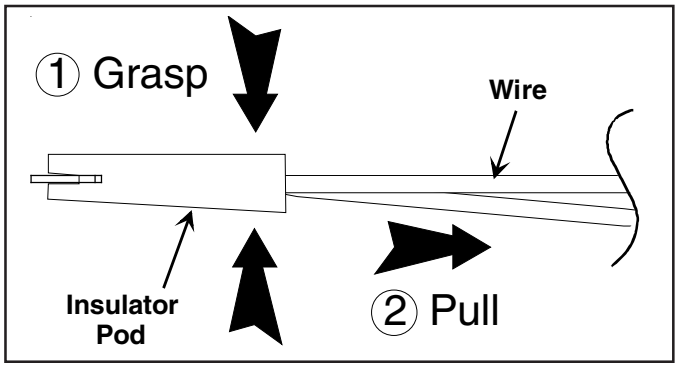
It is neither necessary or advisable to attempt measurement of the high voltage.

Before touching any oven components or wiring, always unplug the oven from its power source and discharge capacitor.

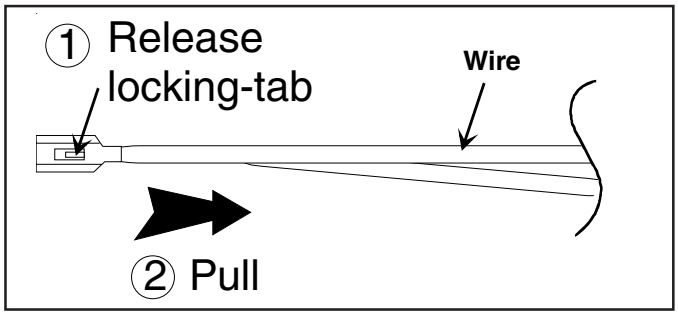
Disconnecting Wire Terminals

All wire terminals are locking-type terminals.
Proceed as follows to disconnect wire terminals:

Insulated terminals:
Grasp insulator pod and pull back.
DO NOT PULL ON WIRE.

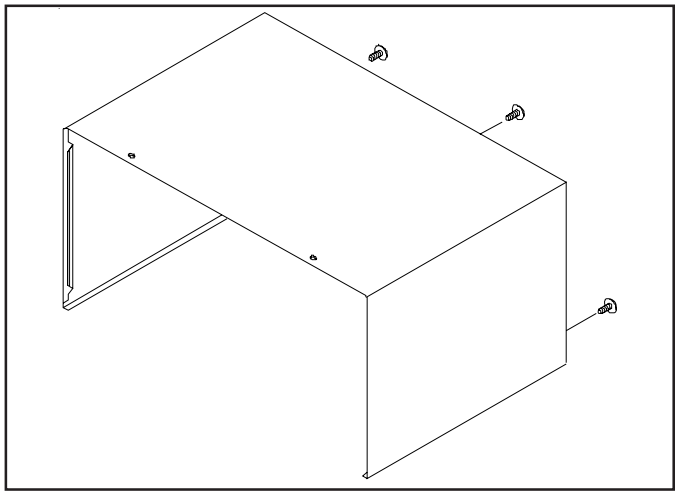


Non-insulated terminals:
Use a small blade screwdriver to depress locking-tab and pull on terminal.
DO NOT PULL ON WIRE.



Outer Case

1. Disconnect power to oven.
2. Remove screws securing outer case to unit.
3. Slide outer case towards rear of unit.
4. Reverse procedure to reassemble.



⚠ CAUTION

During disassembly some foam gaskets may require removal. These components must be replaced for proper circulation of air over the components and through the oven cavity.

Disassembly Procedures

⚠ WARNING

To avoid the risk of electrical shock, personal injury, or death, disconnect power to oven and discharge the capacitors before following any disassembly procedure.

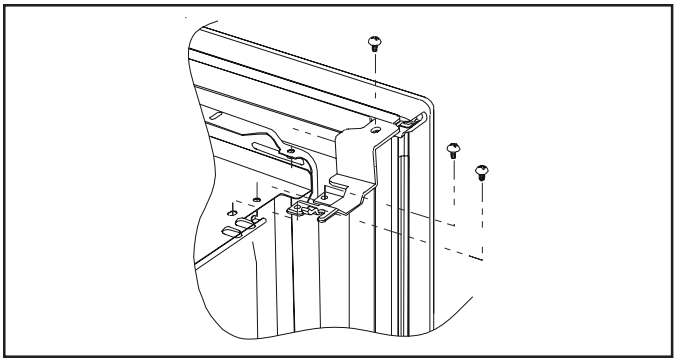
Door Assembly

⚠ CAUTION

A microwave leakage test must be performed anytime a door assembly is removed, replaced, disassembled, or adjusted for any reason.

Door Removal

1. Disconnect power to oven.
2. Remove outer case, see "Outer Case" procedure.
3. Remove screws securing top hinge stopper to unit cavity.



4. Remove oven door assembly from unit.
5. Reassemble in reverse order.

Door Disassembly

1. Disconnect power to oven.
2. Remove oven door, see "Door Removal" procedure.
3. Begin at the bottom of the door near hinge, insert flat blade screwdriver between choke cover and outer door panel. Gently pry upward on choke cover to release tabs. Work in clockwise direction to remove choke cover.

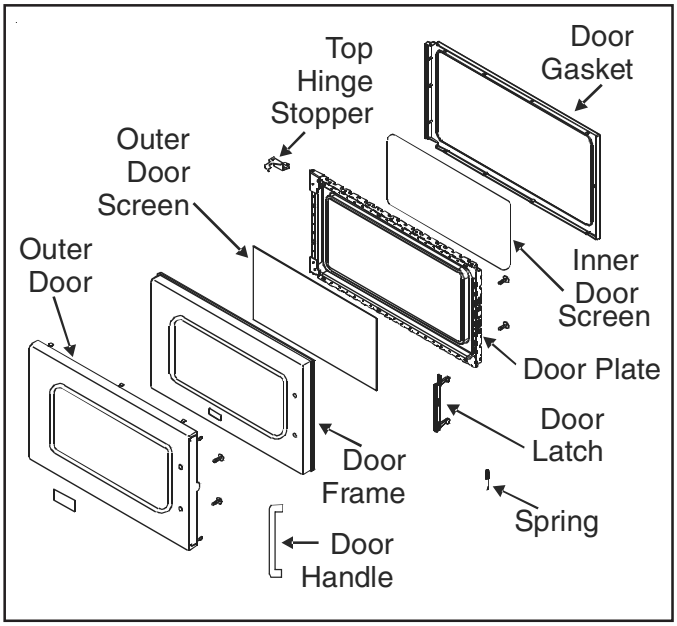
⚠ CAUTION

To avoid property damage, care must be taken when prying choke cover from oven door.

4. Slide latch assembly downward and pull away from door frame to release.
5. Remove screws securing choke assembly to outer door panel.

NOTE: When disassembling door, use caution to prevent deformation of slats on door frame/choke assembly.

6. Begin at hinge side of door near bottom, insert flat blade screwdriver between door frame/choke assembly and outer door panel. Gently pry outer door panel away from door frame to release tabs. Work in clockwise direction to remove door frame.
7. Remove spring from hinge assembly.
8. Remove screws securing hinge assembly to choke assembly.
9. Reassemble in reverse order.



⚠ CAUTION

A microwave leakage test must be performed anytime a door assembly is removed, replaced, disassembly, or adjusted for any reason.

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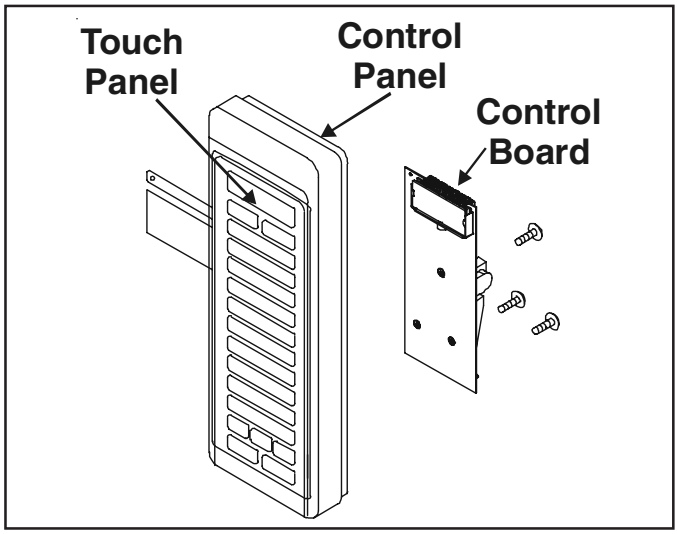
Disassembly Procedures

⚠ WARNING To avoid the risk of electrical shock, personal injury, or death, disconnect power to oven and discharge the capacitors before following any disassembly procedure.

Control Panel (Electronic)

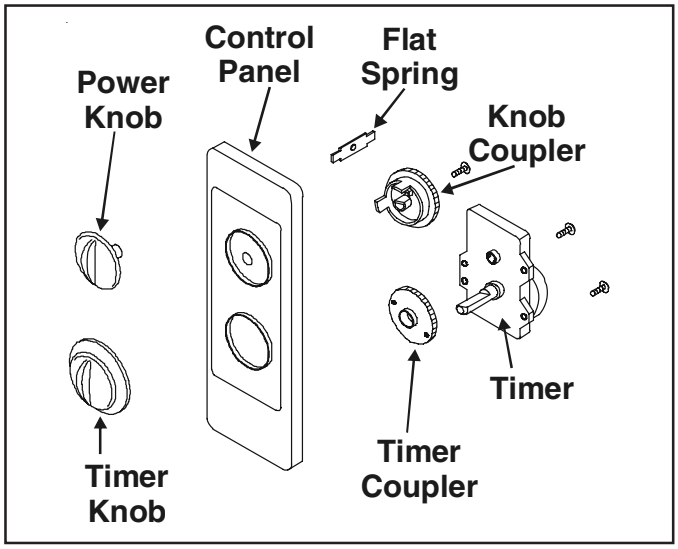
1. Disconnect power to oven.
2. Remove outer case, see "Outer Case" procedure.
3. Disconnect and label wires from control board.
4. Open oven door.
5. Remove screw securing ground strap.
6. Remove screw securing control panel to cavity. Lift control panel up and out to release tabs.



7. Remove screws securing control board to control panel.
8. Replace component and reverse procedure to reassemble.

Control Panel (Mechanical)

1. Disconnect power to oven.
2. Remove outer case, see "Outer Case" procedure.
3. Disconnect and label wires from control.
4. Open oven door.
5. Remove screw securing control panel to cavity. Lift control panel up and out to release tabs.



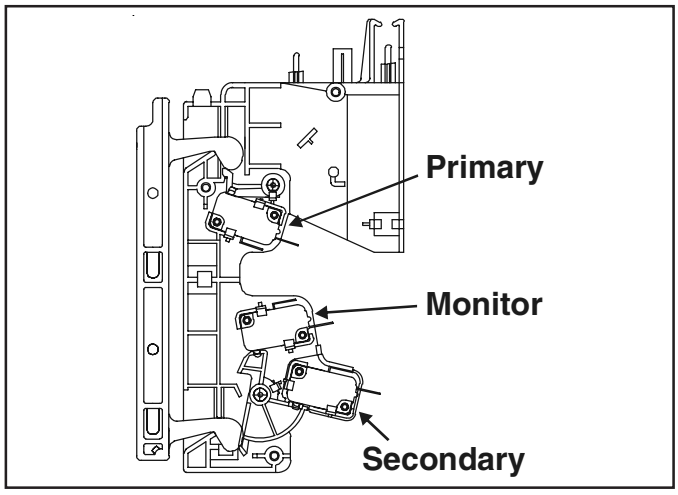
6. Remove timer knob from timer.
7. Remove screws securing timer to control panel and remove timer.
8. Remove timer couple from timer.
9. Remove screw securing knob coupler and flat spring from control panel.
10. Replace component and reverse procedure to reassemble.

Interlock Assembly

Primary switch is operated by the top latch arm.

Interlock Switch Removal

1. Disconnect power to oven and remove outer case, (see "Outer Case" procedure).
2. Remove control panel, (see "Control Panel" section).
3. Remove mounting screws securing interlock switch to unit chassis.
4. Disconnect and label wire connections.



NOTE: After repairing the door or the interlock system, it is necessary to check the switch continuity before operating the oven.

⚠ CAUTION

Before replacing a blown monitor fuse, test the primary interlock switch, secondary interlock switch, monitor switch, and power relay contacts for proper operation. If the monitor fuse is blown by a failed switch operation, all switches and controller must be replaced.

Disassembly Procedures

⚠ WARNING

To avoid the risk of electrical shock, personal injury, or death, disconnect power to oven and discharge the capacitors before following any disassembly procedure.

Adjusting Interlocks

The interlock monitor, primary, and secondary switches act as a final safety switch, protecting the operator from microwave energy. After adjusting the interlock switch assembly, verify wires are correctly connected.

For door fit and switch operation, switch bracket is adjustable.

1. Disconnect power to oven and remove outer case, (see "Outer Case" procedure).
2. Loosen switch bracket mounting screws.
3. Close oven door, move switch bracket toward rear of oven until door gap is less than 1/64–inch (0.5 mm).
4. Hold switch bracket securely for proper switch operation and door fit, retighten screws.
5. Open oven door slowly, watching the switches. Verify switches release in the following order.
   - Primary interlock switch
   - Secondary interlock switch
   - Interlock monitor switch

NOTE: Adjust the switch bracket until all switches operate in proper sequence.

6. Close the oven door slowly, watching the switches. Verify switches activate in the following order.
   - Interlock monitor switch
   - Secondary interlock switch
   - Primary interlock switch
7. When proper switch sequence has been achieved, tighten the switch bracket securely.

⚠ CAUTION

A microwave leakage test must be performed anytime a door assembly is removed, replaced, disassembled, or an adjustment of switch bracket is performed.

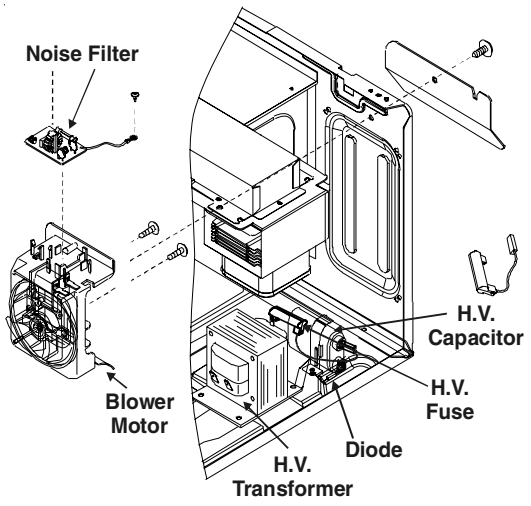
High Voltage Capacitor

High voltage capacitor should always be discharged by shorting a terminal to a chassis ground. The capacitor has a internal "shunt" resistor, but the mechanical discharge should always be performed to avoid personal injury.

High Voltage Capacitor Removal

1. Disconnect power to oven and remove outer case, (see "Outer Case" procedure).
2. Discharge high voltage capacitor.
3. Remove and label wire leads from capacitor terminals.
4. Remove screw securing capacitor strap to bottom plate.
5. Slide capacitor out of capacitor strap and remove capacitor.
6. Replace capacitor and reverse procedure to reassemble.

NOTE: When replacing H.V. components, route H.V. wires at least 1/4" from all grounded surfaces to prevent arcing.



Diode

1. Disconnect power to oven and remove outer case, (see "Outer Case" procedure).
2. Discharge high voltage capacitor, (see "High Voltage Capacitor" section).
3. Disconnect diode from high voltage capacitor and remove screw securing diode to ground.
4. Replace diode and reverse procedure to reassemble.

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Disassembly Procedures

⚠ WARNING

To avoid the risk of electrical shock, personal injury, or death, disconnect power to oven and discharge the capacitors before following any disassembly procedure.

High Voltage Fuse

1. Disconnect power to oven and remove outer case, (see "Outer Case" procedure).
2. Discharge high voltage capacitor, (see "High Voltage Capacitor" section).
3. Disconnect high voltage fuse wire terminals from transformer and capacitor.
4. Replace high voltage fuse and reverse procedure to reassemble.

Transformer

1. Disconnect power to oven and remove outer case, (see "Outer Case" procedure).
2. Discharge high voltage capacitor, (see "High Voltage Capacitor" section).
3. Disconnect and label wire leads from transformer.
4. Place unit on it's back to gain access to mounting screws.
5. Remove screws securing transformer and remove.
6. Replace transformer and reverse procedure to reassemble.

Filter Assembly / Fuse

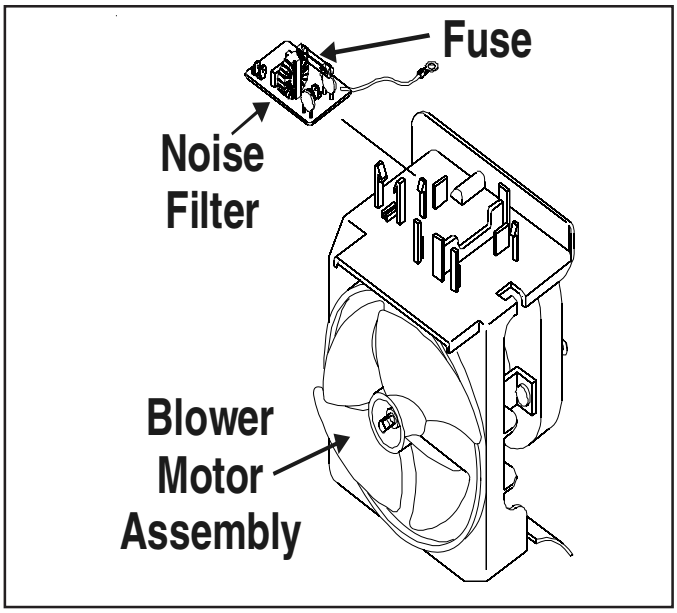
1. Disconnect power to oven and remove outer case, (see "Outer Case" section).
2. Remove fuse from filter assembly board. See caution below.
3. Disconnect and label wires from filter assembly.
4. Remove screw securing ground wire to chassis.
5. Carefully press tabs to release assembly from locating pin.
6. Replace component(s) and reverse procedure to reassemble.

⚠ CAUTION

Before replacing a blown monitor fuse, test the primary interlock switch, secondary interlock switch, monitor switch, and power relay contacts for proper operation. If the monitor fuse is blown by a failed switch operation, all switches and controller must be replaced.

Blower Assembly

1. Disconnect power to oven.
2. Remove outer case, see "Outer Case" procedure.
3. Disconnect wire terminals from blower motor.
4. Remove noise filter board from blower assembly bracket.
5. Remove screws securing vent deflector located on the rear of the unit.
6. Press downward on upper plastic tab securing blower assembly to rear chassis wall.
7. Tilt top portion of blower assembly inward and raise upward to release bottom securing tabs.
8. Replace component and reverse procedure to reassemble.



Disassembly Procedures

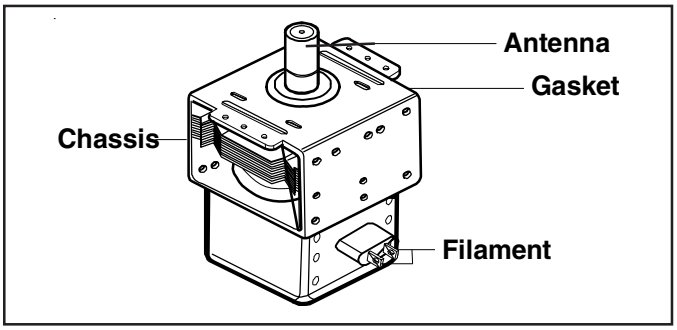
⚠ WARNING

To avoid the risk of electrical shock, personal injury, or death, disconnect power to oven and discharge the capacitors before following any disassembly procedure.

Magnetron

Magnetron is located on the side of the cavity.

1. Disconnect power to oven and remove outer case, (see "Outer Case" section).
2. Discharge high voltage capacitor, (see "High Voltage Capacitor" section).
3. Remove terminal plug from filament terminals.
4. Remove screws securing magnetron cutout bracket to magnetron.
5. Remove screw securing wire support from magnetron.
6. Remove screws securing magnetron to the wave guide.



7. Replace magnetron and reverse procedure to reassemble.

NOTE: When replacing magnetron, make sure gasket is in correct position and in good condition.

⚠ CAUTION

During replacement of magnetron, be certain the R.F. anode gasket is in place around the anode stud.

⚠ WARNING

A microwave leakage test must be performed anytime a magnetron assembly is removed, replaced, disassembled, or adjusted for any reason.

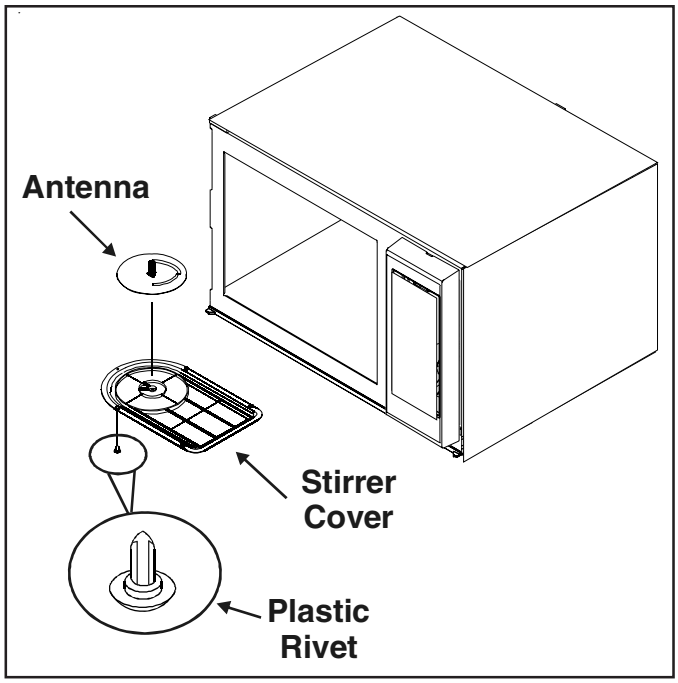
Splatter Shield / Antenna

NOTE: Be careful not to bend antenna when removing splatter shield.

1. Disconnect power to oven.
2. Open oven door to gain access to splatter shield.
3. Remove inner portion of plastic rivet from splatter shield.
4. Remove outer portion of plastic rivet from splatter shield.
5. Slide splatter shield to the right to release tabs securing splatter shield to top of oven cavity.
6. Remove splatter shield from oven cavity.
7. Replace component and reverse procedure to reassemble.

NOTE: When replacing splatter shield, verify motor shaft is aligned with antenna shaft before securing splatter shield.

NOTE: Outer case maybe removed from unit for better visibility in removing splatter shield rivet.



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Disassembly Procedures

⚠ WARNING To avoid the risk of electrical shock, personal injury, or death, disconnect power to oven and discharge the capacitors before following any disassembly procedure.

Stirrer Motor

1. Disconnect power to oven.
2. Remove outer case.
3. Disconnect wire terminals from stirrer motor.
4. Remove screws securing stirrer motor to supporting bracket.
5. Replace component and reverse procedure to reassemble.

NOTE: When replacing stirrer motor, verify motor shaft is aligned with antenna shaft before securing with screws.

Magnetron Thermal Cut-Out (Mag TCO)

1. Disconnect power to unit.
2. Remove outer case, see "Outer Case" procedure.
3. Disconnect wire terminals from TCO.
4. Remove screws securing TCO to magnetron.
5. Replace component and reverse procedure to reassemble.

NOTE: When reconnecting wiring to thermal fuses the connectors must be tight.

Cavity Thermal Cutout (Cavity TCO)

1. Disconnect power to unit.
2. Remove outer case, see "Outer Case" procedure.
3. Disconnect wire terminals from thermal fuse.
4. Remove screw securing thermal fuse to oven cavity.
5. Replace component and reverse procedure to reassemble.

NOTE: When reconnecting wiring to thermal fuse the connectors must be tight.

Tray Replacement

1. Unplug oven from outlet.
2. Using a suction cup or a thin bladed screwdriver, pry upward on front corners and remove tray from unit.
3. Thoroughly clean and degrease sump area.
4. Clean oven cavity bottom where new oven tray will make contact using mineral spirits or any nonflammable degreasing solvent.

NOTE: Detergents, soap, and water are not sufficient to remove oil and grease.

5. Place new tray into unit.

Oven Light Assembly

The light bulb for inside of the oven can be changed only by removing the outer case.

Follow these steps to change the bulb:

1. Disconnect power to unit.
2. Remove outer case, see "Outer Case" procedure.
3. Disconnect wire terminals from oven light socket.
4. Push securing tab to release oven light assembly and lift upward to remove from interlock assembly bracket.
5. Replace component and reverse procedure to reassemble.

NOTE: After replacing the oven light assembly, verify the "Interlock Assembly" is properly aligned and operating correctly.

Slow Acting Relay Assembly

1. Disconnect power to unit.
2. Remove outer case, see "Outer Case" procedure.
3. Disconnect wire terminals from relay assembly.
4. Remove slow acting relay assembly from interlock assembly bracket.
5. Replace component and reverse procedure to reassemble.

Air Guide

1. Disconnect power to unit.
2. Remove outer case, see "Outer Case" procedure.
3. Release plastic tabs securing top portion of light cover to inner cavity side wall.
4. Lift upward on light cover to release bottom securing tabs.
5. Replace component and reverse procedure to reassemble.

Appendix A

Amana
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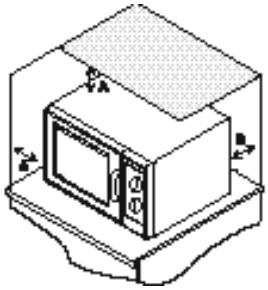
Quick Start Reference Guide

Refer to Product Safety Manual for Safety Statements

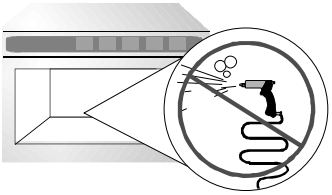
Complete Owner's Manual available online



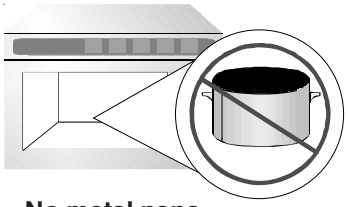
Oven Clearances

A—Allow at least 2" (5.1 cm) of clearance around top and sides of oven. Proper air flow around oven cools electrical components. With restricted air flow, oven may not operate properly and life of electrical parts is reduced.

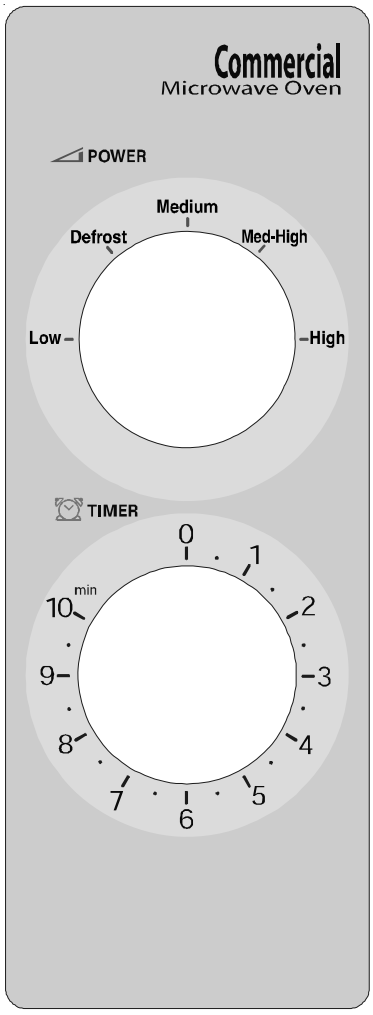
B—Allow at least 2" (5.1 cm) between air discharge on back of oven and back wall.



DO NOT power spray



No metal pans



So...how do I use it?

Heating

1. Open oven door, place food in oven, and close oven door.
2. Turn the power level knob to desired power level.
   - Power level can be set at Low (17%), Defrost (33%), Medium (55%), Med. High (77%), or High power (100%).
3. Turn time entry knob clockwise until desired time displays.
   - Cooking time can be set up to 10 minutes.
   - If turning the timer knob for less than 2 minutes, turn it past 2 minutes and then back to the desired time.
4. Oven begins operation and time counts down.
5. When cooking time elapsed, microwave energy stops and oven signal sounds.

Interrupting Operation

Open oven door to interrupt operation or turn time entry knob counterclockwise to "0". To resume microwave oven operation, close oven door.
If time was changed to "0", time will need to be reset.

Changing Time and Power/Canceling Mistakes

Cooking time and power level can be changed at any time while the oven is operating. Turn knob(s) to desired new setting. To set cooking time to zero, turn time entry knob counterclockwise to "0".

Part No.12891302
Printed 09/04

Amana WaveLink™

For full product documentation visit:
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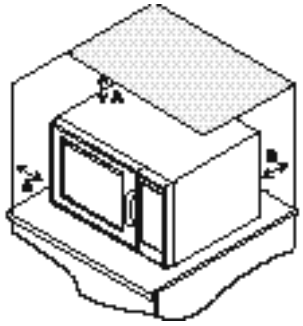

Oven Clearances

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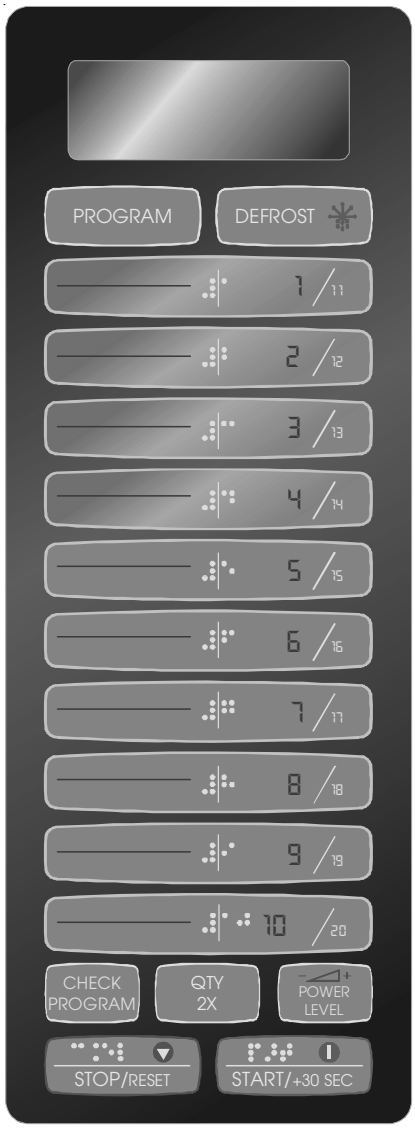
B—Allow at least 2" (5.1 cm) between air discharge on back of oven and back wall.

So...how do I use it?



Manual Operation

To cook food using a specific entered time and power level:

1. Open oven door and place food in oven. Close door.
2. Press POWER LEVEL pad until desired power level is shown.
3. Press the number pad(s) to enter a cooking time.
4. Press START pad.
5. At end of cooking cycle oven beeps 3 times and shuts off.

Programming Items

This microwave oven has 20 programmable pads (1-20).
NOTE: Only pads 1-10 are preprogrammed at the factory.

1. Press PROGRAM pad.
   - **PROGRAM** shows in the display.
2. Press the number pad to be reprogrammed. (ex. pad 5)
   - **PROG--05** shows in the display.
   - To program pads 11-20, press number pad twice rapidly. (ex. To program pad 15, press pad 5 twice rapidly.)
3. Press POWER LEVEL pad to select desired power level.
   - Power level is displayed. For less than 100%, press POWER pad again until desired power level is shown.
4. Press the number pad(s) to enter a cooking time.
5. Press START pad to save new programming changes.
   - **STAGE-2** shows in the display and a long beep sounds.
6. Repeat steps 3-5 to program in stage two or three.
   - After touching START pad to save new programming changes in 2 stage, **STAGE-3** shows in the display.
   - After touching START pad to save new programming changes in 3 stage, **--END--** shows in the display.
   - Up to three different stages can be programmed.
7. Press STOP/RESET pad to save programming changes.
   - Programming function ends.

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Electronic Model - Quick Reference Guide

Quick Start Reference Guide

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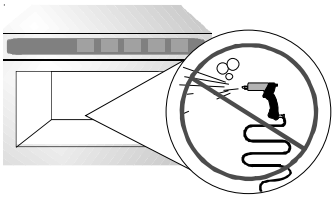
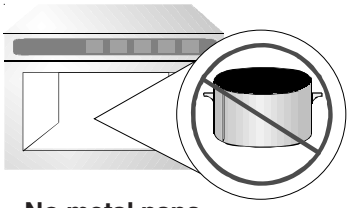


DO NOT power spray



No metal pans

Preprogrammed Pads

(example of pad 5 shown)

To cook food using preprogrammed cooking sequences:

1. Open oven door and place food in oven. Close door.
2. Press the number pad(s) to enter a cooking time.
3. Oven begins to cook.
4. At end of cooking cycle, oven beeps 3 times and shuts off.

Defrost Pad

To defrost food by dividing the defrost time into periods of alternating defrost and stand times by cycling on and off:

1. Open oven door and place food in oven. Close door.
2. Press DEFROST pad.
   - DEFROST indicator lights and **:0** shows in the display.
3. Press the number pad(s) to enter the desired defrosting time.
4. Press START pad.
5. Oven begins to cycle.
   - The display counts down the time to show you how much defrosting time is left in the DEFROST mode.

NOTE: Oven beeps during the defrosting cycle to signal that the food needs to be turned or rearranged.

6. Open door and rearrange food.
7. Close door.
8. Press START pad to continue defrost cycle.

NOTE: If you don't open door to rearrange food, defrost cycle continues.

Check Program Pad

To check the programmed cooking time and power level:

1. Press CHECK PROGRAM pad.
   - **CHECK** shows in the display.
2. Press the number pad(s) which you want to confirm. (ex. pad 5)
   - **PROG--05** will show in the display and then the cooking time and power level for each stage.
3. Press STOP/RESET pad to end the check function.

QTY 2X Pad

To temporarily extend programmed cooking time by twice:

1. Open oven door and place food in oven. Close door.
2. Press QTY 2X pad.
   - **DOUBLE** shows in the display.
3. Press desired preprogrammed pad. (ex. pad 5)
   - **PROG--05** will show in the display.
4. Oven begins cooking.

NOTE: Maximum cooking time is 59 minutes 99 seconds except while using full power. In case of full power (100%), maximum cooking time is 20 minutes 00 seconds.

+30 SEC Pad

To reheat food for 30 second intervals at 100% power:

1. Press +30 SEC pad.
   - **:30** shows in the display.
2. Oven begins to cook.

NOTE: By repeatedly touching the +30 SEC pad, you can also extend the reheating time to a total of 5 minutes, in 30 second increments.

Part No.12891301
Printed 09/04

For full product documentation visit:
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